

CLAIMS

1. A device for delivering a lubricating and/or cooling fluid near the contact area between a tool and a workpiece being machined, comprising at least a circuit for circulation of said fluid and
5 delivering means to deliver said fluid near, or in correspondence of, the contact area between said tool and said workpiece, characterized in that said delivering means include one or more nozzles of the airless type to atomize said fluid.
2. A device according to claim 1, wherein said one or more nozzles
10 have a delivering orifice having a diameter between 0.10 mm and 0.80 mm.
3. A device according to claim 1, wherein said one or more nozzles have a fan shaped planar configuration of the jet.
4. A device according to claim 3, wherein said one or more nozzles
15 have a spray angle of the jet between 10° and 80°.
5. A device according to claim 1, wherein said circuit comprises means to supply said fluid to said one or more nozzles with pressures not higher than 150 bar.
6. A device according to claim 1, wherein said circuit comprises
20 means to supply said fluid to said one or more nozzles with pressures between about 5 bar and about 70 bar.
7. A device according to claim 1, wherein said one or more nozzles are externally arranged with respect to said tool.
8. A device according to claim 1, wherein at least one of said one
25 or more nozzles is in fluid communication with an internal duct provided in said tool.
9. A method for delivering a lubricating and/or cooling fluid near the

- contact area between a tool and a workpiece being machined, wherein said fluid is supplied through a circuit and delivered near, or in correspondence of, the contact area between said tool and said workpiece, characterized in that delivering of said fluid is carried out by its atomization through one or more airless type nozzles.
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10. A method according to claim 9, wherein said one or more nozzles have a delivering orifice having diameter between 0.10 mm and 0.80 mm.
- 10 11. A method according to claim 9, wherein said one or more nozzles have a fan shaped planar configuration of the jet.
12. A method according to claim 11, wherein said one or more nozzles have a spray angle of the jet between 10° and 80°.
13. A method according to claim 9, wherein said fluid is supplied to said one or more nozzles with pressures not higher than 150 bar.
- 15 14. A method according to claim 9, wherein said fluid is supplied to said one or more nozzles with pressures between about 5 bar and about 70 bar.
15. A method according to claim 9, wherein delivering of said fluid by atomization is provided externally to said tool.
- 20 16. A method according to claim 9, wherein delivering of said fluid by atomization is provided internally to said tool.